REMARKS

In the Office Action mailed January 23, 2009 the Office noted that claims 1-21 were pending and rejected claims 1-21. Claims 1-21 have been amended, no claims have been canceled, and, thus, in view of the foregoing claims 1-21 remain pending for reconsideration which is requested. No new matter has been added. The Office's rejections and objections are traversed below.

REJECTIONS under 35 U.S.C. § 102

Claims 1-21 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Ellison, U.S. Patent No. 7,082,615. The Applicants respectfully disagree and traverse the rejection with an argument and amendment.

Allison discusses a system and a method for protecting software environment in isolated execution. According to the disclosed system, the execution environment comprises two modes of operation: a normal execution mode and an isolated execution mode. An isolated area of the memory is used in the isolated execution mode. It is accessible only to elements operating in the isolated execution mode, via specific functionalities and a processor nub loader that operates only in the isolated execution mode. Any access to the isolated area of the memory aborts when the access does not have the isolated access mode asserted. Therefore, the isolated area of the memory is accessible only via

specific functionalities of the isolated execution mode.

As a consequence, Allison does not disclose the invention as claimed that concerns automatic validation of a computer program able to access secure memory and non-secure memory, using an encryption function and a decryption function, comprising the steps of controlling that any function adapted to read data from the secure memory and to produce data in the non-secure memory is an encryption function and that any data produced by the decryption function is stored in said secure memory.

Furthermore, in view of the architecture as disclosed in Allison where two different execution modes are used, the claimed invention seems not to be obviously derivable from the teaching of this discloser. According to Allison an application is executed in the normal execution mode or in the isolated execution mode. In reason of the specific functionalities of the isolated execution mode, in particular to access the isolated area of the memory, an application that is executed in the normal execution mode cannot access the isolated area of the memory. Thus, due to the distinct execution modes, it is not requested to validate automatically an application able to access secure memory and non secure memory. As a consequence, the problem solved in the claimed invention does not make sense in the system disclosed by Allison. Furthermore, it is observed that the claimed controlling steps are not disclosed.

On page 3 of the Office Action, it is asserted that Ellison col. 6, line 44 through col. 7, line 27 discloses "any function adapted to read data from said secure memory (MS) and to produce data in said non-secure memory (MNS) is an encryption function; and any data produced by said decryption function is stored in said secure memory (MS)," as in claim 1.

However, Ellison col. 6, line 44 through col. 7, line 27 merely discusses how an applet executes within the context of the isolated area. In contrast, it appears that the only time the pages in the isolated area are encrypted is when they are going to be purged, not when in use. For example, consider Ellison col. 3, line 62 through col. 4, line 7 which states

> The operating system nub 16 may choose to support paging of data between the isolated area and ordinary (e.g., non-isolated) memory. **If so, then the operating system nub 16 is also responsible for encrypting and hashing the isolated area pages before evicting the page to the ordinary memory, and for checking the page contents upon restoration of the page.** The isolated mode applets 46.sub.1 to 46.sub.K and their data are tamper-resistant and monitor-resistant from all software attacks from other applets, as well as from non-isolated-space applications (e.g., 42.sub.1 to 42.sub.N), dynamic link libraries (DLLs), drivers and even the primary operating system 12. Only the processor nub 18 or the operating system nub 16 can interfere with or monitor the applet's execution. [Emphasis added]

Thus, if the pages must be encrypted before eviction, they are not encrypted while being worked on by the applet. Thus, it cannot be said that Ellison disclose any function adapted to read data from said secure memory (MS) and to produce data in said

non-secure memory (MNS) is an encryption function. Why would Ellison require an encryption/decryption function as the contents of the memory when active are not encrypted.

Claim 19 recites similar features. For at least the reasons discussed above, claim 1 and 19 and the claims dependent therefrom are not anticipated by Ellison.

On page 5 of the Office Action, it is asserted that Ellison, col. 6, line 44 through col. 7, line 27; col. 8, lines 47-65; and col. 9, lines 6-24 disclose "a verification step (E340) conforming to claim 1 is executed before the execution (E420) of each function of said program," as in claim 1.

However, Ellison, col. 6, lines 49-56 states

> The processor nub loader 52 is invoked by execution of
> an appropriate isolated instruction (e.g., Iso_Init)
> and is transferred to the isolated area 70. From the
> isolated area 80, **the processor nub loader 52 copies
> the processor nub 18 from the system flash memory
> (e.g., the processor nub code 18** in non-volatile memory
> 160) into the isolated area 70, **verifies and logs its
> integrity,** and manages a symmetric key used to protect
> the processor nub's secrets. [Emphasis added]

Thus, Ellison discloses that it verifies the entire program when it copies it. Not as the claim requires, verifying each function just prior to execution.

Withdrawal of the rejections is respectfully requested.

SUMMARY

It is submitted that the claims satisfy the requirements of 35 U.S.C. § 102. It is also submitted that

claims 1-21 continue to be allowable. It is further submitted that the claims are not taught, disclosed or suggested by the prior art. The claims are therefore in a condition suitable for allowance. An early Notice of Allowance is requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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